

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A wiring structure for semiconductor device, comprising:
a wiring layer that includes copper as main component; and
a crystal grain promotion layer that promotes enlargement in a crystal grain of the wiring layer.
2. (Currently amended) The wiring structure for semiconductor device according to claim 1, wherein[[:] the crystal grain of the wiring layer satisfies a relation of $D > 10 \times L$ where D is an average grain diameter of crystal grain to be enlarged finally in the wiring layer and L is mean free path of electrons electron.
3. (Currently amended) The wiring structure for semiconductor device according to claim 1, wherein[[:] the crystal grain promotion layer is disposed between a semiconductor or dielectric film and the wiring layer and one of a semiconductor and a dielectric film.
4. (Currently amended) The wiring structure for semiconductor device according to claim 3, wherein[:] the crystal grain promotion layer has a good contact with the one of a semiconductor and or dielectric film and the wiring layer and is of a material that has a low reactivity to the semiconductor or dielectric film and the wiring layer.
5. (Currently amended) The wiring structure for semiconductor device according to claim 1, wherein[:] the crystal grain promotion layer comprises one of a is of high melting point metal, a or nitride of the high melting point metal, and a or carbide of the high melting point metal.
6. (Currently amended) A wiring structure for semiconductor device, comprising:
a wiring layer that includes copper as main component; and

a crystal grain promotion layer that promotes enlargement in a crystal grain of the wiring layer, The wiring structure for semiconductor device according to claim 1,
wherein[[:]] the crystal grain promotion layer comprises is of a material selected from the group of titanium, tantalum, titanium nitrides, titanium carbides, tantalum nitrides and tantalum carbides.

7. (New) The wiring structure for semiconductor device according to claim 1, wherein said crystal grain promotion layer comprises a metal with a melting point of at least 150 °C.

8. (New) The wiring structure for semiconductor device according to claim 1, wherein said crystal grain promotion layer comprises one of titanium, tantalum, zirconium, hafnium, vanadium, tungsten, niobium, molybdenum, a nitride of any of these and a carbide of any of these.

9. (New) The wiring structure for semiconductor device according to claim 1, wherein an average grain diameter (D) of said crystal grain of said wiring layer is in a range from 7 to 8 times a width (W) of said wiring layer.

10. (New) The wiring structure for semiconductor device according to claim 1, wherein said copper in said wiring layer comprises a (111) copper face.

11. (New) The wiring structure for semiconductor device according to claim 1, wherein said copper comprises approximately a single crystal.

12. (New) The wiring structure for semiconductor device according to claim 1, wherein said wiring layer is formed directly on said crystal grain promotion layer.

13. (New) The wiring structure for semiconductor device according to claim 1, wherein said crystal grain promotion layer is formed on one of silicon, silicon nitride, silicon oxide, impurity-doped silicon, and an organic dielectric material.

14. (New) The wiring structure for semiconductor device according to claim 1, wherein an average grain diameter of said crystal grain is at least 390 nm.

15. (New) A method of forming a wiring structure for a semiconductor device, comprising:
forming a crystal grain enlargement promoting layer; and
forming a wiring layer comprising copper on said promoting layer, said promoting layer promoting an enlargement of a crystal grain of said copper.

16. (New) The method of forming a wiring structure for semiconductor device according to claim 15, wherein said forming said promoting layer and forming said wiring layer are performed by one of sputtering, vapor deposition, laser annealing, plating and chemical vapor deposition.

17. (New) The method of forming a wiring structure for semiconductor device according to claim 15, wherein said forming said promoting layer and forming said wiring layer are performed under a vacuum.

18. (New) The method of forming a wiring structure for semiconductor device according to claim 15, further comprising:
performing a heat treatment in a range from 100°C to 400 °C.

19. (New) The method of forming a wiring structure for semiconductor device according to claim 17, wherein said forming said wiring layer comprises growing enlarged copper crystal

grains at an initial stage of room temperature grain growth.

20. (New) The method of forming a wiring structure for semiconductor device according to claim 15, further comprising:

providing a substrate, said promoting layer being formed between said substrate and said wiring layer.